

01 WHAT IS CLAIMED IS:

- 02 1. A method of preparing a crystalline molecular sieve comprising:
- 03 a. forming an aqueous slurry comprising an active source of silicon oxide and an
- 04 organic templating agent capable of forming the molecular sieve;
- 05 b. spray drying the aqueous slurry to form particles;
- 06 c. heating the spray dried particles at a temperature and pressure sufficient to cause
- 07 crystallization of the molecular sieve.
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- 09 2. The method of claim 1 wherein step c is conducted in the absence of added water.
- 10 3. The method of claim 1 wherein the aqueous slurry further comprises an active source of
- 11 an alkali metal oxide.
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- 13 4. The method of claim 1 wherein the aqueous slurry further comprises an active source of
- 14 the oxides of aluminum, boron, iron, gallium, indium, titanium, or mixtures thereof.
- 15 5. The method of claim 4 wherein the oxide is aluminum oxide.
- 16 6. The method of claim 1 wherein the aqueous slurry further comprises seed crystals of the
- 17 molecular sieve.
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- 19 7. The method of claim 1 wherein the molecular sieve is the zeolite ZSM-5.
- 20 8. The method of claim 1 wherein the molecular sieve is zeolite beta.
- 21 9. The method of claim 4 wherein the mole ratio of silicon oxide to the oxides of aluminum,
- 22 boron, iron, gallium, indium, titanium, or mixtures thereof is greater than 12.
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- 24 10. A method of preparing a crystalline molecular sieve comprising:
- 25 a. forming an aqueous slurry comprising an active source of silicon oxide and an
- 26 organic templating agent capable of forming the molecular sieve;
- 27 b. spray drying the aqueous slurry to form particles;
- 28 c. adding additional organic templating agent to the spray dried particles to form a
- 29 slurry; and
- 30 d. heating the slurry from step c at a temperature and pressure sufficient to cause
- 31 crystallization of the molecular sieve.
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- 33 11. The method of claim 10 wherein the aqueous slurry further comprises an active source of
- 34 an alkali metal oxide.

- 01 12. The method of claim 10 wherein the aqueous slurry further comprises an active source of
02 the oxides of aluminum, boron, iron, gallium, indium, titanium, or mixtures thereof.
03 13. The method of claim 12 wherein the oxide is aluminum oxide.
04 14. The method of claim 10 wherein the aqueous slurry further comprises seed crystals of the
05 molecular sieve.
06 15. The method of claim 10 wherein the molecular sieve is the zeolite ZSM-5.
07 16. The method of claim 10 wherein the molecular sieve is zeolite beta.
08 17. The method of claim 12 wherein the mole ratio of silicon oxide to the oxides of
09 aluminum, boron, iron, gallium, indium, titanium, or mixtures thereof is greater than 12.
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